

ABSTRACT OF THE DISCLOSURE

A control system for controlling an oil or gas burner heating system comprises an ultraviolet flame sensor. Flame is detected and preanalyzed by the control for flame quality factors reflecting the degree of drift from optimal operating conditions including the average flame intensity, and the peak intensity frequencies. Other sensors detect other drift indications including exhaust-gas-stack temperature. A modem may automatically transmit data to a remote computer used by fuel providers and service personnel or upon a call request from the personnel to the control. Software installed in the remote computer calculates the next fuel delivery date based on data transmitted from the control system and from the service personnel including degree-day data, date of last fuel delivery, and customer characterization data for fine-tuning the prediction based on historical data. The software also calculates the next servicing date for the control system based on data transmitted from the control system.